AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (**currently amended**): An interventional catheter assembly comprising:

a. an operating head coupled to a drive shaft and a drive assembly for rotation wherein the operating head is adjustable between two different operating diameters;

b. a catheter system mounted for axial translation at a proximal end with a control pod and communicating at a distal end with the operating head; and

c. a control pod housing operational components for selectably rotating the operating head, wherein the control pod incorporates a selection switch that allows an operator to select between two different operating head diameters and additionally comprises control circuitry for inactivating power to the operating head when the current level required to maintain a desired rotational speed at the operating head exceeds a predetermined value.

Claim 2 (**previously presented**): An interventional catheter assembly of any of claims 1, 6, 18 or 56, additionally comprising an operating head drive motor coupled to the drive shaft, wherein the drive motor comprises a variable speed drive motor that delivers a constant voltage for any specified rotational output.

Claim 3 (**original**) An interventional catheter assembly of claim 2, wherein the current delivered to the drive motor is adjusted, under load conditions, if the voltage for any specified rotational output is insufficient to produce the specified rotational output under load conditions.

Claim 4 (**previously presented**): An interventional catheter assembly of any of claims 1, 6, 18 or 56, additionally comprising an operating head drive motor coupled to the drive shaft, wherein the drive motor employs a cascaded variable regulator voltage source.

Claim 5 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6, 18 or 56, wherein the control pod incorporates selectable operator adjustment features allowing an operator to increase and decrease rotational speed delivered to the drive shaft.

Claim 6 **(previously presented)**: An interventional catheter assembly comprising:

a. an operating head coupled to a drive shaft and a drive assembly for rotation;

b. a catheter system forming a lumen mounted for axial translation at a proximal end with a control pod and communicating at a distal end with the operating head;

c. a control pod housing operational components for selectably rotating the operating head; and

d. a torque selection feature providing operator selection of preselected torque levels delivered by the drive assembly to the drive shaft.

Claim 7 **(original)** An interventional catheter assembly of claim 6, wherein the torque selection feature incorporates an override setting for each selectable torque level, whereby the drive assembly is inactivated when a preselected torque level is exceeded.

Claim 8 is **cancelled.**

Claim 9 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6 or 18, additionally having an aspiration motor comprising a multi-lobed vacuum pump that provides a consistent, high level of aspiration during operation of the interventional catheter assembly.

Claim 10 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6 or 18, additionally having an aspiration system comprising a plurality of vacuum pumps connected in series.

Claims 11 – 15 are **cancelled.**

Claim 16 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6, 18 or 56, wherein the operating head, catheter system and control pod are provided as a sterile, disposable kit.

Claim 17 **(original)** An interventional catheter assembly of claim 16, additionally comprising a fluid receptacle in fluid communication with the catheter system.

Claim 18 **(previously presented)**: An interventional catheter assembly comprising:

a. an operating head coupled to a drive shaft and a drive assembly for rotation;

b. a catheter system forming a sealed lumen mounted for axial translation at a proximal end with a control pod and communicating at a distal end with the operating head; and

c. a control pod housing operational components for selectably rotating the operating head, wherein the control pod houses a drive motor operably coupled to the drive shaft and the drive motor is coupled to an actuator mounted on the catheter system distally to the control pod and in operable communication with the drive system, and wherein the actuator incorporates a switch that activates at least one of the drive system and an aspiration system.

Claim 19 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6 or 18, wherein the control pod incorporates a guidewire brake operable to clamp a guidewire in a stationary position when engaged and to allow translation of the guidewire through the brake when released.

Claims 20-23 are **cancelled.**

Claim 24 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6, 18 or 56, additionally comprising a console unit incorporating system control and display features and a motor providing vacuum for aspiration to the catheter assembly.

Claims 25 and 26 are **cancelled.**

Claim 27 **(original)** An interventional catheter assembly of claim 24, wherein the console unit is in electrical communication with the control pod and provides power to the drive system.

Claim 28 **(original)** An interventional catheter assembly of claim 24, wherein the console unit displays output operational information including at least three of operating head rotation rate, operating head advance rate, aspiration rate, elapsed time of operation, aspiration volume, and fluid flow rate at the target site.

Claim 29 **(previously presented)**: An interventional catheter assembly of claim 1, wherein the selection switch allows the operator to change the direction of rotational output of the drive system.

Claims 30 and 31 are **cancelled.**

Claim 32 **(previously presented)**: An interventional catheter assembly of any of claims 1, 6, 18 or 56, wherein the control pod incorporates selectable operator adjustment features allowing an operator to increase and decrease rotational speed delivered to the drive shaft.

Claims 33 – 55 are **cancelled.**

Claim 56 **(currently amended)** An interventional catheter assembly comprising: an operating head coupled to a drive shaft and a drive assembly for rotation, a catheter system communicating at a distal end with the operating head; a control pod housing operational components for rotating the operating head; a guidewire brake operable to clamp a guidewire in a stationary position when engaged and to allow translation of the guidewire through the brake when released; ~~and~~ a guidewire brake control system interrupt that prevents the drive system from being actuated with the guidewire brake is in a release position, and a guidewire brake selectable interrupt override control that, when actuated, permits an operator to rotate the operating head at low speed during withdrawal of the operating head from a material removal site of a patient .

Claim 57 is **cancelled.**

Claim 58 **(previously presented)** An interventional catheter assembly of any of claims 1, 6, 18 or 56, wherein the operating head has advanceable, rotatable cutter surfaces at or near a distal end.

Claim 59 **(currently amended)** An interventional catheter assembly of any of claims ((1,)) 6, 18 or 56, additionally comprising control circuitry for inactivating power to the operating head when the current level required to maintain a desired rotational speed at the operating head exceeds a predetermined value.

Claim 60 **(previously presented)** An interventional catheter assembly of any of claims 1, 6, 18 or 56, wherein the drive shaft, the catheter system and an aspiration conduit traverse the control pod.

Claim 61 **(previously presented)** An interventional catheter assembly of claim 6, wherein a torque setting provides a preselected current level of less than 1 amp to the drive system and another torque setting provides a preselected current level of greater than 1.1 amp to the drive system.

Claim 62 **(previously presented)** An interventional catheter assembly of claim 6, additionally comprising a torque gauge that shows the torque delivered to the operating head as current drawn by the motor drive system.

Claim 63 **(previously presented)** An interventional catheter assembly of claim 18, wherein the actuator additionally incorporates a clamp mechanism that, when actuated, securely grips the catheter system.

Claim 64 **(previously presented)** An interventional catheter assembly of claim 18, wherein the actuator is slidable over the catheter system.

Claim 65 **(previously presented)** An interventional catheter assembly of any of claims 1, 6, 18 or 56, additionally comprising control circuitry providing a delay between the time the drive system and aspiration systems are inactivated, such that the drive system may be inactivated immediately upon actuation of a switch, while the aspiration system may be inactivated after a delay period following actuation of the drive system.